

**CLAIMS:**

1. A system comprising:

a database storing label records and associated label data for a plurality of different products manufactured by an organization;

a label record manager that controls the creation and modification of the label records by multiple users within the organization, wherein the label record manager includes a revision control module to track changes made to the label records and the associated label data; and

an output manager that receives input from the multiple users and permits the users to selectively access the label records for printing on label media to be affixed to the different products.

2. The system of claim 1, wherein the revision control module of the label record manager maintains modification logs for the label records and provides change histories for the label records.

3. The system of claim 1, wherein the revision control module of the label record manager generates images of labels from the label records and associated label data, and archives the images with corresponding date and time stamps.

4. The system of claim 1, wherein the revision control module of the label record manager presents an interface by which a user can check-in and check-out a label record for revision.

5. The system of claim 1, wherein the database further stores reusable label templates that define one or more fields, and the system further comprises a template manager software module that presents an interface for managing the label templates stored by the database.

6. The system of claim 5, wherein the template manager includes a revision control module to track changes made to the label records

7. A method comprising:  
 storing label records and associated label data;  
 generating images of labels based on the label records and associated label data; and  
 archiving the images with corresponding date and time stamps.

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8. The method of claim 8, further comprising recording changes to the label records in a database.

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9. The method of claim 7, further comprising displaying change histories for the label records based on the recorded changes.

10. The method of claim 7, further comprising presenting an interface by which a user can check-in and check-out a label record.

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11. A computer-readable medium comprising instructions for causing a programmable processor to:

store label records and associated label data; and  
 generate images of labels based on the label records and associated label data; and  
 archive the images with corresponding date and time stamps.

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12. The computer-readable medium of claim 11, further comprising instructions for causing the processor to:

present an interface by which a user can check-in and check-out a label record; and  
 record changes to the label records in a database.

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13. A system comprising:  
 a database storing a label record having a publication status;  
 a label record manager that presents an interface for maintaining the label record and setting the publication status of the label record; and  
 an output manager for printing a label at one of a plurality of output locations based on the label record and the publication status.

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14. The system of claim 13, wherein the label record manager presents an interface by which a user can selectively change the publication status between a draft status and an approved status.

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15. The system of claim 13, wherein the database includes configuration data defining the plurality of output locations and a plurality of groups of an organization, and wherein the database associates the label record with one of the groups of the organization.

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16. The system of claim 13, wherein the plurality of groups comprising a plurality of business units, and the plurality of output locations comprise manufacturing facilities.

17. The system of claim 13, wherein the label record manager includes revision control modules.

18. A method comprising:  
storing a label record having a publication status;  
presenting an interface for setting the publication status of the label record; and  
printing a label at one of a plurality of output locations based on the label record and the publication status.

19. The method of claim 18, further comprising storing label templates and label data, wherein the label records associate the label data with fields of the label templates.

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20. The method of claim 19, further comprising:  
storing configuration data defining a plurality of groups within an organization; and  
associating each label template with one of the groups.

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21. A computer-readable medium comprising instructions for causing a programmable processor to:  
store a label record having a publication status;

present an interface for setting the publication status of the label record; and  
print a label at one of a plurality of output locations based on the label record and the  
publication status.

5        22.     The computer-readable medium of claim 21, wherein the instructions cause the  
processor to store label templates and label data, wherein the label records associate the label  
data with fields of the label templates.

10       23.     The computer-readable medium of claim 19, wherein the instructions cause the  
processor to:

store configuration data defining a plurality of groups within an organization; and  
associating each label template with one of the groups.

15       24.     A label management software system comprising a database storing configuration  
data defining an organization having a number of business units and manufacturing facilities,  
wherein the label management system creates a label record associated with one of the  
business units, and selectively prints a label at one of the manufacturing facilities based on  
the label record and the associated business units.

20       25.     The system of claim 24, wherein the database stores configuration data defining a  
number of packaging levels, and further wherein the label record designates at least one of  
the packaging levels.

25       26.     The label management system of claim 24, wherein the label management system  
further comprises:

a label record manager to create the label record from a label template and label data;  
and

an output manager to control the printing of the label upon authorizing a user having  
access rights to print the label.

30       27.     A method comprising:

storing configuration data defining a number of business units and manufacturing facilities;

storing label records and corresponding label data;

associating the label records with the business units;

5 selecting one of the label records; and

printing a label at one of the manufacturing facilities according to the selected label record and the associated business unit.

28. The method of claim 27, further comprising:

10 storing configuration data defining a number of packaging levels; and

associating each label record with a packaging level.

29. The method of claim 27, further comprising associating a number of label records to form a set of related label records.

30. The method of claim 29, further comprising graphically illustrating the packaging levels associated with the set of related label records.

31. A system comprising:

a database storing label records and associated archived label images of labels; and

an output module to print a label from a selected one of the label records, wherein the output module includes an interface for presenting the archived label image associated with the selected label record.

25 32. The system of claim 31, wherein the database further stores reusable label templates that define one or more run-time fields, wherein the output manager displays the run-time fields when printing the label to prompt for the run-time information.

30 33. The system of claim 31, wherein the database is replicated from a central database to a local database located at a manufacturing facility, and further wherein the output module selectively accesses the central database and the local database.

34. A method comprising:  
 storing label records and associated archived images of labels;  
 selecting one of the label records;  
 5 displaying the archived label image associated with the selected label record for  
 verification by a user; and  
 printing a label upon receiving input indicative of the verification.
35. The method of claim 34, further comprising:  
 10 storing label templates that define one or more run-time fields; and  
 displaying the run-time fields when printing the label to prompt the user for the run-  
 time information.
36. The method of claim 35, wherein the run-time information includes at least a batch  
 5 code and a lot code.
37. The method of claim 34, further comprising:  
 replicating the label records and associated archived images from a central database  
 to a local database located at a manufacturing facility; and  
 20 and selectively retrieving the label records and associated archived images from the  
 central database and the local database based on a user selection.
38. The method of claim 34, further comprising generating the archived images from the  
 label records when a user sets a publication status for the label records.
- 25 39. A computer-readable medium comprising instructions for causing a processor to:  
 store label records and associated archived images of labels;  
 select one of the label records;  
 display the archived label image associated with the selected label record for  
 30 verification by a user; and  
 print a label upon receiving input indicative of the verification.

40. The computer-readable medium of claim 39, further comprising instructions for causing the processor to:

store label templates that define one or more run-time fields; and

display the run-time fields when printing the label to prompt the user for the run-time information.

41. A computer-readable medium containing data comprising:

a label template defining a number of fields, a packaging level and one or more associated business units;

label data including text and graphics;

a label record associating the label data with the fields of the label template; and configuration data defining one or more remote output locations.

42. The computer-readable medium of claim 41, wherein the configuration data defines one or more manufacturing facilities.

43. The computer-readable medium of claim 41, further comprising a pass through flag controlling when the label record supercedes a second label record.

44. The computer-readable medium of claim 41, wherein the configuration data defines a number of users, and access control rights for the users.

45. A label management system comprising:

a database storing label templates and label records associating label data with the label templates;

a template design tool to create the label templates, wherein the template defines one or more fields;

a graphics design tool to create graphics;

a template manager software module to parse the templates and store for the templates and field information within the database;

a graphics manager to receive the graphics from the graphics design tool and store corresponding graphical data within the database;

a label record manager software module presenting an interface to create label records for associating the graphics and text within the fields of the label template; and

an output manager software module for printing a label based on a selected one of the label records and the associated graphics and text.

46. The label management system of claim 45, wherein the database stores configuration data defining a plurality of groups and a plurality of output locations for an organization, wherein the template manager presents an interface for associating the templates with the groups.

47. The system of claim 45, wherein the database is one of a relational (RDBMS), a hierarchical (HDBMS), a multidimensional (MDBMS), object oriented (ODBMS or OODBMS) or object relational (ORDBMS) database management system.

48. A label management software system comprising:

a database storing configuration data defining plurality of organizations, each organization having at least one group and at least one output location; and

a plurality of software modules executing on computing devices coupled to the database and presenting an interface by which each authorized users of the groups create label records, and selectively prints the labels at the corresponding output location for the organizations.

49. The label management system of claim 48, wherein the software modules calculate fees for each organization and record the fees within the database.

50. The label management system of claim 49, wherein the software modules calculate fees for the organizations based at least one of (a) a number of accesses by each organization, (b) a number of label records and label templates stored by each organization, and (c) a subscription fee.



51. A method of providing a label management service comprising:  
storing configuration data defining plurality of organizations, each organization having at least one group and at least one output location;  
5 presenting an interface for by which each authorized users of the groups create label records; and  
in response to input from the users, selectively printing labels at the corresponding output locations for the organizations.

10 52. The method of claim 51, further comprising calculating fees for each organization and recording the fees within a database.

53. The method of claim 52, wherein calculating the fees comprises calculating fees based on at least one of (a) a number of accesses by each organization, (b) a number of label records and label templates stored by each organization, and (c) a subscription fee.

54. A computer-readable medium comprising instructions for causing a processor to:  
store configuration data defining plurality of organizations, each organization having at least one group and at least one output location;  
20 present an interface for by which each organization creates corresponding label records; and  
selectively print labels at the corresponding output locations for the organizations.

55. The computer-readable medium of claim 54, further comprising instructions for  
25 causing a processor to calculate fees for each organization and recording the fees within a database.

56. The computer-readable medium of claim 54, further comprising instructions for causing a processor to calculate fees based at least one of (a) a number of accesses by each  
30 organization, (b) a number of label records and label templates stored by each organization, and (c) a subscription fee.

57. A label management system comprising:  
means for centrally storing label templates and label records associating label data  
with the label templates;

5 means for storing configuration data defining a number of groups within an  
organization and a number of output locations;  
means for controlling updates to the label templates and the label records; and  
means for printing labels at the output locations.

10 58. The label management system of claim 57, further comprising means for storing  
configuration data defining a number of packaging levels

59. The label management system of claim 57, further comprising means for creating  
label templates.

60. The label management system of claim 57, further comprising means for creating  
graphics.